

Kindly add the following new claims 21-38 as follows:

21. (New) A method for production of salt from sea brine and subsoil brine with reduced calcium ion impurity, comprising (i) culturing marine cyanobacteria obtained from hyper-saline habitat in brine, (ii) inoculating the resultant cyanobacterial culture on cloth which is permeable to brine but retains the cyanobacteria, (iii) contacting the cloth for an optimum period with concentrated raw brine for uptake of calcium ion, (iv) removing the cloth containing the cyanobacteria from the raw brine and immersing it for an optimum period in dilute brine to ooze out accumulated calcium in the resultant cyanobacterial mass, (v) recycling the cloth containing the cyanobacteria in a fresh batch of raw brine, (vi) evaporating the treated raw brine up to a density of 25.5 °Be, (vii) charging the resultant brine into a crystallizer and allowing salt to be produced up to a density of 29 °Be.

22. (New) The method as claimed in claim 21, wherein the marine cyanobacteria are obtained from hyper-saline environments in the west seacoast of India, and belong to the class of cyanophyceae.

23. (New) The method as claimed in claim 21, wherein the marine cyanobacteria are from the families of Oscillatoriaceae, Nostocaceae and Chroococcaceae.

24. (New) The method as claimed in claim 21, wherein the marine cyanobacteria are selected from the group consisting of Lyngbya aestuarii SM-1, Oscillatoria sp., Spirulina sp., Anabaena sp. and Synechocystis sp. } new  
swath?

25. (New) The method as claimed in claim 24, wherein the marine cyanobacteria are selected from the group consisting of (1) Lyngbya aestuarii SM-1 (ATCC PTA-4602) and (2) Consortium of Lyngbya sp., Oscillatoria sp., Anabaena sp., Spirulina sp., and Synechocystis sp. diff  
(ATCC PTA-4603).

26. (New) The method as claimed in any one of claims 21-23, wherein the marine cyanobacteria are used either singly or in the form of a consortium.            } *Yes*

27. (New) The method as claimed in any one of claims 21-23, wherein the marine cyanobacteria are isolated in pure form using a serial dilution method.            } *No*

28. (New) The method as claimed in claim 27, wherein the isolated cultures are multiplied in brine without any added nutrients.            } *When?*

29. (New) The method as claimed in claim 28, wherein the cultures are multiplied in brine of 3-16 °Be' density for a period of 36-72 hours.           

*A2* 30. (New) The method as claimed in claim 21, wherein the raw concentrated brine treated by the method has a density in the range of 18-25 °Be' so as to eliminate spontaneously a major portion of calcium ion impurity in the brine in the form of gypsum ( $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ ) during concentration of the brine beyond 14 °Be', thereby minimizing a load on the marine cyanobacteria and simultaneously minimizing a volume of brine.            ?

31. (New) The method as claimed in claim 30, wherein the raw concentrated brine treated by the method has a density of 20-24 °Be'.           

32. (New) The method as claimed in claim 21, wherein the fresh wet weight of cyanobacteria required for uptake of calcium ion from raw concentrated brine is in the range of 1-10 g/L, and the contact time with the brine is based on the duration of the lag and log phases of its activity for maximum uptake of calcium ions.

33. (New) The method as claimed in claim 32, wherein the contact time is 6-48 hours.

34. (New) The method as claimed in claim 21, wherein the cyanobacteria removes 1-100% of residual content of calcium ions in the concentrated brine.

35. (New) The method as claimed in claim 34, wherein 30-70% of residual content of calcium ions is removed.

A<sup>2</sup> 36. (New) The method as claimed in claim 21, wherein the cyanobacteria after uptake of calcium ion from concentrated raw brine is exposed to dilute brine of density in the range of 3-15 °Be' during a declining phase of its activity, so as to ooze out the accumulated calcium ion and make the cyanobacteria suitable for recycle into a fresh batch of concentrated raw brine.

37. (New) The method as claimed in claim 36, wherein exposure to the dilute brine is conducted for 1-2 hours.

38. (New) The method as claimed in claim 21, that is implemented in solar salt works.

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**Please rewrite the Abstract of the Disclosure as set forth on the separate sheet attached hereto.**